

# *Railway Gazette* INTERNATIONAL

## VOLUME 144 (1988)

**Editor: Richard Hope** CEng MIEE MIMechE

Reed Business Publishing, Quadrant House, Sutton,  
Surrey SM2 5AS, Great Britain

---

### INDEX

This index covers the 12 issues of *Railway Gazette* published between January and December 1988 (Volume 144), together with the two associated annual publications *Developing Metros 1988* distributed with the October issue and *Developing Railways 1989* which was distributed with the December 1988 issue.

Most entries in this index are classified first by country and then under the railway or metro authority concerned. Entries affecting one or more country are listed under International, which precedes the alphabetical listing of countries.

Separate sections at the end of the index cover Letters to the Editor, Maps, Product News, Publications, and People.

For the convenience of those who do not bind back copies, the table below shows the numbers of pages contained in each issue. Developing Metros and Developing Railways entries are prefixed DM and DR

January	1-60	July	429-492
February	61-132	August	493-552
March	133-192	September	553-636
April	193-276	October	637-708
May	278-348	November	709-784
June	349-428	December	785-856

---

\* indicates a feature article or a biography on the People page

# INTERNATIONAL GEOGRAPHICAL

Africa: aid and development in Francophone countries	817*
Africa: Brazzaville workshop examines the problems	DR5
Africa: links to the sea	807*(map)
Africa: six projects to benefit from African Development fund	9
Africa: sub-Saharan seminar	199
Africa: training requirements to overcome neglect	830*
Asia: Asean Express luxury train	793
Developing Metros launched	641
Developing Metros market	DM74
Developing Railways market	DR78
Europe: air congestion may help rail services	726
Europe: Channel Tunnel costs up	715
Europe: Channel Tunnel shuttle train design developments	67,182*,294
Europe: Channel Tunnel high speed train design teams	139
Europe: Channel Tunnel progress	792
Europe: High speed revolution in Western Europe	215*
Europe: Intercontainer low deck wagon plan	839*
Europe: Intermodal freight strategy needed	308*
Europe: more industry partnerships	713
Europe: Last international TEE service withdrawn	144
Europe: open market for railway equipment	510
Europe: major changes planned to overnight trains	645
Europe: more railways join Hermes programme	648
Europe: piggyback prospects	281
Europe: Spain-France-Switzerland Talo service plan	455,720
Europe: TGV Nord progress	291
Europe: Three Capitals TGVs	227*
Europe: Tilting train trials	294
Europe: train ferry renaissance	323*
Individual wheel bogie concept for the 1990s	583*
Heat pump air conditioning	467*
How resilient pads protect concrete sleepers	85*
Railway design trends	450*
IVA 88 transport show	443*
Leipzig spring fair report	292
Low-floor tram orders increase	597*
Maglev developments	137
Metro fire precautions reviewed worldwide	27*
Minimetros miss the target	659*
N.America: deregulation issues	65
N.America: engineering track for high axleloads	385*
Passenger Information survey	689*
Research must become more international	575*
Rail v Air for freight movement	197
Railcar survey	525*
Rails into Europe conference topics and report	299*,353,468*
Resilient slab track for high speed lines	247*
Shaping rails & wheels to support high axleloads	371*
Simulators aid driver training	39*
Three-country through route across South America	69
Three phase drives topics	333
Track management model for cost effective maintenance	379*
Train Catering survey	463*
UIC multi-system locomotive study	499
UITP Singapore congress	DM76
VAL automated metros adopted by more cities	673*(maps)
XVII Panamerican Railway Congress, Habana	43*
World rail speed record set by West German ICE	355

<b>ALBANIA</b>	
HSSHd link to Yugoslavia closed	570
HSSHd double tracking study	648
<b>ALGERIA</b>	
Algiers metro go-ahead	203
Border with Morocco reopened	499,715
SNTF Ain M'ila - Tebessa line construction starts	791
SNTF diesel loco order	797
SNTF Mohammadia - Bechar line upgrading plan	791
SNTF signalling joint venture	13
SNTF tunnel and bridge renovation	288
World Bank loan for track renewal	499
<b>ANGOLA</b>	
Benguela Railway repair plans	18,141
Benguela Railway diesel locos	204
<b>ARGENTINA</b>	
FA Buenos Aires - La Paz service	504
FA Cordoba suburban line passed to municipal company	288,501
FA La Plata journey times cut	204
FA railbus plan	715
FA Roca suburban lines electrification	283,715
FA privatisation	DR17
FA to be three operating companies	567
FA wagon orders	13,505
Subte Line A extension	11,439(map),563
Subte Line D extension	144,359
Subte Line E2 to General Savio	144
Subte premetro cars delivered	795
Subte ticketing changes	648
Through route to Peru agreed	69
<b>AUSTRALIA</b>	
Agent for Omni crossings	649
Agent for US track parts	441
AN Alice - Darwin line study	12
AN optic fibre links	441,505
Darling Harbour monorail	366,565
Gold Coast peoplemover	13,360
Hotham Valley Railway coaches	797
IEA engineering awards	288
Melbourne tramway expansion	439
Mitsubishi Electric factory opening	565
QR 1988 review	DR58
Railway industry in trouble	726
SRANSW Avon tunnel	139
SRANSW Chatswood station	12
SRANSW East Hills - Glenfield cut-off line open	144
SRANSW telecoms contract	73,360
SRANSW interurban EMUs ordered from Comeng	205,289
SRANSW new chief executive	641
SRANSW tamping machines	145
SRANSW Tangara EMU	12,67,173,720
SRANSW 1988 review	DR55
Very Fast Train project	510,645
V/Line G class diesel loco order	505
Westrail ATC for Perth area	797
Westrail diesel loco order	441
Westrail container train to Adelaide	501
Westrail Kwinana - Picton line	12
Westrail Perth EMU order	203
<b>AUSTRIA</b>	
GySEV electrification complete	504
ÖBB Class 1822 dual voltage locos	721
ÖBB Coach 2000 demonstrator	12
ÖBB digital communications links	796
ÖBB level crossing removal	796
ÖBB Neue Bahn plans	75*(map)
ÖBB Pendolino plans	720
ÖBB piggyback service improved	791
ÖBB prototype piggyback wagons	721
ÖBB Villach marshalling yard	73
Wiener Metallwerke agreement with Deans Powered Doors	145
Wien U-Bahn car order	721
Wien U-Bahn expansion projects	167

<b>BANGLADESH</b>	
ADB funds for flood repairs	69,360
BR 1988 review	DR23
BR Bogra - Bausi link plan	791(map)
Jamuna river bridge plan	715,791

<b>BELGIUM</b>	
Alstom control in ACEC Energie Automatic Systems new factory	565
Bombardier takes control of BN	145
GLT guided bus service starts	504
SNCB AM86 suburban EMUs	361
SNCB high speed line funds sought	791
SNCB/BR/SNCF 3-Capitals TGV	227*
SNCB/DB/Interfrigo banana train	288

<b>BENIN</b>	
OCBN completion plan	210

<b>BOLIVIA</b>	
Argentina-Bolivia-Peru route	69

<b>BOTSWANA</b>	
BR wagon orders	205,355,505
BR radio signalling installed	821*
BR Suda Pan branch	715,822*(map)

<b>BRAZIL</b>	
Estrada de Ferro Parana Oeste	283
Fepasa electrification hold-ups	150
Fortaleza metro go-ahead	439
Germans to build rail mill	145
Goias light rail contract	503,720
Mafersa sell-off	721
National Steel Mills diesel loco	13
New railways construction	78
Rail delivery from Poland complete	721
RFFSA diesel loco rehabilitation	437
RFFSA Petrolina-Ingazeiras cut-off route planned	437(map),504
RFFSA Parana corridor tenders	205
RFFSA rehabilitation fund	559
Soviet financial help for new links	504
Urban lines transferred to CBTU	139

<b>BURKINA FASO</b>	
RAN break-up plan	210,294
RAN Tambao line progress	796

<b>CAMEROON</b>	
Regifercam diesels to be refurbished	648
Regifercam new line study	288

<b>CANADA</b>	
Alcatel (SEL) new Don Mills plant	361
BC Hydro rail sold to Intel	564,796
BC Rail black box monitors	205
BC Rail Shalath Bluff tunnel	360
Bombardier/Alstom TGV/LRC joint promotion	73
Cancon/Jackson Jordan merger plan	360
CN Rail diesel loco lease and order	441
CN Rail/GO Transit Toronto commuter service agreement	72
CN Rail/Terra Transport deal to close Newfoundland lines	504,564
CN Rail to refurbish VIA coaches	715
Canadian Atlantic Railway created	717
CP Rail diesel loco orders	205,360
CP Rail Pact track for tunnel	391*
CP Rail integral freight train	9
Deregulation issues	65
Edmonton Transit extension	440
Edmonton Transit 1988 review	DM23
GO Transit Pickering - Whitby line	648
Intermodal container port for Surrey	72
Ex-BC Rail private freight plan	360
Montreal 15 year transport plan	503
Montreal Metro 1988 review	DM45
Quebec orders coaches for CP Rail	360
Port Coquitlam - Vancouver commuter service planned	648
Siemens factory modernisation	289
Sydney Steel rail rolling mill	441
TTC ALRVs in service	205
TTC Scarborough ALRT	504,720
TTC pass readers installed	720
TTC public address renewal	796
TTC training institute	440

Trenton wagon works to Lavalin	289
Unions may jeopardise rail jobs	197
UTDC compensated for order	649
Vapor Corp EVI for ACTS	73
VIA Rail class FPH40-2 diesel locos	73
VIA Rail credit-card telephones	72,721
VIA Rail Halifax maintenance depot	72

<b>CHILE</b>	
Arica - La Paz Railway to be renamed Arica Regional Railway	440
Santiago Metro limited company	287
Santiago Metro finance	565
Santiago Metro 1988 review	DM57
EFE 1988 review	DR29

<b>CHINA</b>	
Alatau Pass link to USSR	446
CR accident repercussions	281
CR Austrian radio order	564
CR Baoji - Zhongwei line started	204
CR Brei international coaches	13,460*
CR Class DF5 diesel loco	72,204
CR Class 6K electric loco	564
CR Class 8K loco disagreement	355
CR contract responsibility	67
CR Daqing line first stage opened	139
CR double tracking projects	643
CR electrification projects	717
CR Jundushan tunnel completed	72
CR loan for line modernisation	360
CR new Qingdao station	288
CR optic fibre link	797
CR overloading concern	570
CR Shanghai station opened	72
CR Shenzhen - Guangzhou line improvements	204
CR ultrasonic detection car	289
CR Xi'an - Zhengzhou electrified	717
CR Yangqian - Shexian line	7
CR Zhengzhou - Wuhan line	289
Dalian light rail plan	720
Guangzhou metro study	720
Hainan Railway construction	283
Shanghai metro work to start	719(map)
SKF Shanghai depot	361
Taming the desert	DR10
Tianjin metro plan	720
Wuhan light rail line planned	720

<b>COLOMBIA</b>	
Bogota metro	435,647
Medellin metro	71,439,DM39
FNC national network problems	210
FNC 1988 review	DR31
Port and rail link plans	504

<b>CUBA</b>	
FdeC locos ordered from USSR	145
Habana metro	11(map)

<b>CZECHOSLOVAKIA</b>	
CKD Zlicin tramcar works	287
CSD double deck EMU order	501
CSD dual voltage loco order	289,409*
CSD Hodonin - Kutky electrification	12

<b>DENMARK</b>	
ABB stake in Scandia Randers	649
DSB ATC installed	144
DSB data monitoring on locos	73
DSB Great Belt link go-ahead	792
DSB IC3 inter-city DMUs	329
DSB København - Fredericia sleeper service started	504
DSB wheelset maintenance	605
DSB + Box road-rail service	792
København metro planned	11(map)

<b>EGYPT</b>	
Cairo urban metro plan	504
ER Baharia - Helwan upgrading	561
ER Beni Suef - Minya resignalling	13
ER Cairo - El Marg line	289,720
ER Cairo - Luxor doubling	561,648
ER Cairo - Marsa Matruh sleeper	504
ER Cairo regional metro EMUs	145
ER Cairo regional metro formal opening	33*(map)

ER funding for resignalling	12
ER level crossing accident	78
ER national upgrading plan	9
ER Qena - Safaga opening	67
ER sleeping cars from Semaf	721

## EIRE

CIE Dublin suburban plan	720
--------------------------	-----

## FINLAND

Oy North Trans formed	145
Rautaruukki/Valmet wagon bogies	73
Rautaruukki Y25 wagon bogies	73
Turku - Stockholm train ferry plan	7
VR financial problems	18
VR joins Intercontainer pool	72
VR Kerava - Skoldvik electrified	360
VR orders computer interlockings	145
VR administrative restructuring	643

## FRANCE

Allevard Industries joins Stedef	565
Alsthom/Bombardier joint TGV/LRC promotion	73
Alsthom to close Raimes plant	649
Channel Tunnel construction	641,696
Eurometro consortium formed	205
Grenoble Tramway Line 2	203
Intermodal agreement on Channel Tunnel traffic	141
Lille metro 1988 review	DM27
Lyon metro 1988 review	DM32
MAN/MTU buy SEMT Pielstick	361
Marseille metro Line 2 funding	361
Matra-Transfinex formed	721
Mors signalling to De Dietrich	505
Nantes Tramway 1988 review	DM48
Nice rapid transit study	199
Novatrans articulated wagon	145
Orly VAL link	9,359(map)
Paris rail improvements plan	353
Promorail formed	205
RATP automation/DOO plans	497, 670*
RATP Bo metro	143,256*
RATP buys prototype bogies	205
RATP clean up campaign	30*
RATP crime prevention measures	31
RATP MF88 metro cars	143
RATP MP89 metro cars	720
RATP St Denis - Bobigny tramway work starts	563,647
RATP track/train video links	147
RER extension plans 18,137,723*(map)	
RER Line C to Cergy St Christophe	435
RER Line D created	72
RER St Michel-Notre Dame interchange station opens	144,203
Rouen light rail line	12
SNCF Astrée development contract	139
SNCF asynchronous-motored EMU	565
SNCF class 26001 Sybic loco	289
SNCF new train ferry	12,505
SNCF Don Sainghain - Béthune line electrified	283
SNCF Erment line	67,643,723
SNCF tri-current TGV set formed	504
SNCF Gare de Lyon accident	497
SNCF high speed freight trains	141,789
SNCF/RATP Interconnexion Ouest energised	67
SNCF intermodal wagon prototype	355
SNCF loading gauge enlargement	72
SNCF locomotor order	360
SNCF Moret - Nevers line electrified	204,357
SNCF Motorail services	144
SNCF Paris - Cherbourg line to be electrified	69
SNCF Poitiers - La Rochelle line to be electrified	204,720
SNCF President asked to resign	557
SNCF safety drive	654,726,791
SNCF TGV-A to open early	355
SNCF TGV-A power cars	69,285,396*
SNCF TGV-A tracklaying progress	82*
SNCF TGV family grows	228,766*
SNCF TGV-Grand Sud proposals	717
SNCF TGV-Nord	281,291,570,765*(map),791
SNCF TGV-Nord protests	570

SNCF TGV-Interconnexion route round Paris settled	199(map),643
SNCF TGV-PSE Lyon bypass	141,791
SNCF/BR/SNCB 3-Capitals TGV	227*
Soulé SK peoplomover for Paris	796
Tiphook Rail SA formed	441
TML tunnel track bids	360
Toulouse VAL go-ahead	563

## GERMAN DEMOCRATIC REPUBLIC

DR Berlin - S. alsund electrified	440
DR maximum speeds raised	7,796
DR end of steam traction	504
DR/DB proposals for Hannover - Berlin high speed line	645
Mukran - Klaipeda train ferry route	504
Leipzig fair report	292
Lightweight wheelset designed	505
VEB exchanges coach parts for Hungarian windows	797

## GERMAN FEDERAL REPUBLIC

AEG presents E19 loco to museum	797
AEG-Westinghouse Transit Systems	205
Bayerische Zugspitz Railway opens new summit station	144
Berlin Zoo station reconstruction	72
Bocholt town buys VT628 railcar	648
BVG West Berlin S-Bahn	159*(map)
DB Bielefeld - Lemgo line	796
DB bus services to be privatised	67
DB change in legal status call	446
DB Class 221 diesels sold to Greece	144
DB Class 420 EMUs ordered	69
DB corporate identity	453
DB economy measures	65
DB Frankfurt - Hanau S-Bahn	143
DB Fulda - Würzburg neubaustrecke opened	435
DB/DR Hannover - Berlin high speed line proposals	645
DB high speed freight train plan	789
DB holding group set up	561
DB ICE breaks world speed record	355
DB IC-Express orders	7,217*,559
DB IC-G freight train proposal	199,283
DB Interregio replacing D-trains	615
DB Intermodal freight	7
München-Riem container terminal	796
DB national videotext timetable and fare enquiry service	144
DB neubaustrecke Karlsruhe link	791
DB neubaustrecke route choice	9
DB neubaustrecke sections opened	199
DB northern electrification plan	204
DB Nürnberg marshalling yard	499
DB optic fibre data link	564
DB refrigerated banana train	288
DB S-Bahnen saving the cities	154*
DB Schaffhausen - Singen line to be electrified	204
DB simplified signalling to cut costs	513
DB sundries speed up	7
DB Tauren car-carrier to by-pass motorway jams	435
DB ex-TEE class VT601s sold	12
DB/Thyssen/Breda joint venture for high-speed technology	283
DB tilting trains planned	141,357
DB tilting DMU order	792
DB wagon order from GDR	13
DB Wesel - Bocholt line deal	648
DB world speed record	355,497
DB Wunstorf station rebuilt	720
DB/Elbe-Humber Ro Line Emden - Immingham train ferry	139,643
Dortmund Railway radio-controlled shunting loco	564
DSG renamed Deutsche Service Gesellschaft	204
Frankfurt airport M-Bahn	559
HHA Hamburg DT4 metro trains	537*
High speed rail v air v maglev	433
Intermodal terminal at Rheine	720
IVA 88 exhibition report	443
Kiepe Elektrik passes to Alsthom	797
Kombiwagon wagon order	205,797
Magnetbahn GmbH expansion	144

M-Bahn Berlin opening delays	799
Karlsruhe light rail extension	796
Köln B80D LRVs from Duewag	72
Krupp MaK DE1024 diesel locos	499
MAN crane group reorganisation	796
München low-floor tram prototype	204
München U-Bahn EMU delivery	441
München U-Bahn extensions	12,361,795(map)
Nürnberg U-Bahn 1988 review	DM51
Schenker restructured	797
Self steering wheelsets	164*
Train ferry to USSR proposed	570
Transrapid maglev route 78,137,499,799	
Transrapid maglev attains 406km/h	67
Transrapid maglev endurance trials	201
Tricon subsidiary formed	13
TUI new motorail services	199
Wendelstein Bahn railcar order	721
Westphalian Provincial Railway stone hopper wagon order	73
Weyhausen GmbH reorganisation	73

## GHANA

GRC diesel loco and wagon orders	73
GRC rehabilitation of Central and Eastern lines	559

## GREAT BRITAIN

Ases Holdings and British Brown Boveri combined	13
Ashford business park plan	12
Aston Martin Tickford new office	565
Avon metro (Bristol)	15*(map),439
Battersea Bullet trains ordered	654
Bills promise industry boom	762
Bogies for nuclear flask wagons	649
Brel coaches for China	460*
Brel Horwich foundry sold	648
Brel privatisation	5,561
BR Aberdare line reopened	288,757*
BR ac drives commitment	333
BR Airdrie line extension	648
BR Anglo-Scottish speed-up	201
BR Anglia voltage conversion	360
BR Anglo-German train ferry	139,643
BR Ashford International station	564
BR automatic vehicle identification	841*
BR BICC cable order	205
BR Chiltern lines refurbishment	437
BR Class 60 diesel loco order	355,797
BR Class 91 electric locos	141
BR Class 14X Pacers, legal action from PTEs	726
BR Class 156 delivery	7
BR Class 158 orders	7,793
BR Class 253/4 (HST) re-engining	435
BR Class 319 repeat orders	559,753
BR Class 320 EMU order	797
BR Class 321 EMUs	559,565,649
BR Class 322 EMUs	649
BR Class 423 EMU refurbishment	201
BR Class 442 EMUs	113*,355
BR Class 456 EMUs	360,649
BR Cummins engines approved	73
BR digital telephone exchanges	145
BR DOO on Southern Region	441
BR Dynamic track stabilisers	93*,360
BR ECLM cleared for 225km/h	499
BR ECLM electrification project re-appraised	802
BR engineering costs tumble	747*
BR fleet renewal boom	753*
BR Freightliners and Speedlink merged into Railfreight Distribution	645,745*
BR Grantham - Leeds electrification energised	288
BR hand held stone blower	479*
BR heat pump air conditioning	467*
BR/BAA Heathrow Express and branch planned	435,559(map)
BR high speed Tunnel link	499,507*
BR Hurst Green - Uckfield line resignalling	205
BR InterCity 225 trains	233*,289,802
BR InterCity trains to serve Bradford Forster Square	144
BR intermodal agreement for Channel Tunnel traffic	141
BR investment at high levels	561
BR Isle of Wight stock renewal	648

BR London King's Cross redevelopment scheme	207*,435
BR London Liverpool Street station reconstruction	289
BR low cost maintenance trials on rural lines	609*
BR low track force bogie	589*
BR mail train services	440,720
BR Maintenance Ltd	5
BR management streamlining	739*
BR MkIV coaches	233,289,792,802
BR Midway Valley resignalling	796
BR Networker EMU design unveiled	9
BR Networker DMU/EMU order	355
BR new stations for West Yorkshire	360
BR newspaper trains ended	440
BR NSE station refurbishment	201
BR NSE ticket machine order	73
BR NSE Watford - St Albans line electrification	504
BR optic fibres order	205
BR Overpool station to open	204
BR PI system for Bristol (TM)	505
BR privatisation debate	433,731*,735*
BR procurement policy changes	759*
BR security camera order	564
BR Settle - Carlisle line sell off	570
BR smoking ban	12
BR Solent area electrification	355,564
BR Southern train radio order	289
BR Sprinter DMU reliability	294
BR Sprinter Express air-conditioning	73
BR Sprinter Express launched	285
BR Stansted airport link	12
BR strategic assessment	791
BR Swinton cut-off line	564
BR train manning changes agreed	567
BR train radio order	73
BR Travellers Fare subsidiary sale	440
BR/SNCF/SNCB Three-Capitals TGV	227*,499,559,721
BR Walsall - Hednesford line reopening	440
BR warren truss bridge installed	649
BR WCML speed-up	749
BR world diesel speed record	12
BR York area resignalling	204,441
British Aluminium tank wagons	73
British design contract for Swiss coaches	139
British Steel rail hardening plant	145
British Steel wheelset plant sold	649
Brush Electrical Machines win National Training Award	13
Central London Rail Study	283,510,651*(maps)
Channel Tunnel first trains on construction railway	696*(map)
Channel Tunnel high speed link	499,507*
Channel Tunnel services	141
Channel Tunnel signalling deal	437
Channel Tunnel through trains	227*
Channel Tunnel customs debate	789
Channel Tunnel private high speed line proposals	557,717
Channel Tunnel shuttles	13,182*
Demand for rail investment in Kent and London	207
DLR car order	504
DLR Bank extension	288
DLR expansion plans	361,664*,719
DLR tunnel linings	13
Freightliner terminal at Wilton	564
Garwick Airport peoplomovers	289
GEC-Ansaldo link up	9
G. Manchester LRT financing	147
G. Manchester LRT signalling	13
G. Manchester LRT tenders	71,359,647
Hampshire LRT study	440
Henry Boot factory moved	565
Immingham train ferry plan	139,643
Intermodal for Channel Tunnel	304
Joint bid for Three-Capitals current collection equipment	721
Leeds LRT plan	503,563(map),796
Leyland Bus sold to Volvo	289
LU Acton works crane order	73
LU Angel reconstruction	648
LU crime prevention plan	359

Railway Gazette International Index 1988



## NETHERLANDS

Enka to be Akzo Fibres & Polymer	289
NS air cushion transporter	721
NS Almere - Lelystad open	437
NS Arnhem-Velperpoort rebuilt	
	204
NS Class 6400 diesel locos	360
NS DMU procurement options	499
NS new signalling at Rotterdam	649
NS new station at Nieuwkerk	504
NS synchronous motors for Class 1700 electric locos	67
NS plans for improved timetable	75
NS Rail 21 plan	433
NS signalling order	73
NS tests DB Class 628.2 DMU	144
NS train radio network completed	720
Rotterdam integrated rail/metro/light rail plan	503

## NEW ZEALAND

Hoteller to run ski trains	204,504
NZRC driver-only freight trains	204
NZRC economic trends	713
NZRC Napier - Gisborne repaired	440
NZRC North Island Main Trunk electrification progress	12,499
NZRC resignalling tenders	441
NZRC Road/Rail deal signed	720,792
NZRC Silver Star sold	72
NZRC Tourist subsidiary set up	288
NZRC 1988 review	DR57

## NIGER

OCBN extension from Benin	210
---------------------------	-----

## NIGERIA

Kaduna oil refinery rail link	72
Lagos metro plan revived	205
NR close to paralysis	366
NR diesel loco order	67
NR rehabilitation studies	441

## NORWAY

NSB aluminium-bodied EMU order	505
NSB Hurum airport line plan	795(map)
NSB Trunkline tunnel opened	144
Oso tramways LRV equipment	72
Trondheim tramways closure	504

## PAKISTAN

PR computerised reservations	564
PR expresses accelerated	144,360
PR first home built diesel loco	283
PR to build locos under GM licence	73
PR track rehabilitation loan	564

## PARAGUAY

FCPCAL Posadas - Encarnacion bridge blessed by Pope	204,440
---	---------

## PERU

Enafer diesel locos from Brazil	12
Lima metro funding	435
Peru - Bolivia - Argentina route	69

## PHILIPPINES

Manila LRT Line 2 approved	359
PNR main line south rehabilitation	440

## POLAND

PKP 160 km/h services start	355
PKP Class EP09 electric loco	73
PKP double-deck coach order	565
PKP trunk electrification	504
PKP new train ferry	12
PKP Runow Pomorski - Bialogard line electrified	72
Torun light rail line proposed	72
Warsaw metro 1988 review	DM71

## PORTUGAL

CP investment programme	107*(maps)
CP Porto area improvements	360
Electricity Board wagon order	721

## ROMANIA

Bucuresti metro extensions	72
----------------------------	----

Bucuresti metro 1988 review	DM15
Electropure gets ABB licence	797
Mecanoeexportimport brakes orders	13

## SENEGAL

CFS loan for Dakar improvements	796
---------------------------------	-----

## SINGAPORE

Light rail plan	565
MRTC passengers traffic grows	71
MRTC Boon Lay branch	440
MRTC formal opening	204
MRTC Jurong line opens	719
MRTC opening dates planned	719
MRTC Outram Park - Clementi line opened	287
MRTC Phase 3 go-ahead	647
MRTC services commence	11
UITP Far East congress	DM5,713

## SOUTH AFRICA

Johannesburg metro plan	71(map)
Port Elizabeth LRT	9
SAR as division of SATS	499
SAR end of racial segregation	446,499
SAR higher freight speeds	318*
SATS break up	715
SATS Namibian handover	499
Tshikondeni coal branch	643(map)

## SPAIN

Bilbao metro	203,679*(map)
CAIB acquires Metrasna	505
ET/FV Donostia metro plan	565
ET/FV EMU refurbishment	565
FEVE articulated diesel railcar	355,504
FGC investment programme	564
FGV Valencia LRT tunnel opened	720
International Talgo services	435
Madrid metro expansion	15*(map)
Madrid metro 1988 review	DM36
RENFE Almeria line improvements	102
RENFE Andalusia high speed line construction progress	101*(map)
RENFE Bilbao - Orduña upgrading	204
RENFE Class 269.6 electric loco	791
RENFE Class 269 speed reduction	648
RENFE Class 354 loco for 250km/h	139
RENFE Class 446 equipment	505
RENFE container wagon order	73
RENFE container wagon rebuilding	565
RENFE cross-Madrid tunnel modernisation	145
RENFE diesel shunter order	721
RENFE double-deck coaches	145,649
RENFE first 120km/h freight	288
RENFE gauge change debate	789,791
RENFE high speed traction plans	99,510,791
RENFE investment plan approved	288
RENFE Madrid airport link	201
RENFE national rail plan	97*,288
RENFE rolling stock orders	355
RENFE signalling equipment order	721
RENFE Villarobledo - La Encina line catenary upgrading	355
RENFE Yunquera - Baidés cut off	559
RENFE Zaragoza - Lerida cut-off	199
Talleres de Amurrio motor contract	289

## SRI LANKA

SLGR DMU order	721
SLGR coach tenders called	505
SLGR concrete sleeper factory	721
SLGR diesel engine trials	565
SLGR rehabilitation grant	7,505
SLGR Indian help for rebuilding	285
SLGR Matara - Katalagala line	717

## SUDAN

Egyptian aid for coach plant	357
SR rehabilitation loans	440,501,791

## SWEDEN

SJ Class X2 tilting trains	565
SJ computer network merger	440
SJ Helsingborg station rebuilding	564
SJ Göteborg new line plan	640
SJ investment proposals	12

SJ split with Banverket	446
SL/SJ Stockholm airport link	435,791
Stockholm - Turku train ferry plan	7

## SWITZERLAND

Alpine base tunnel options proposed	291*(map),645(map)
Bahn 2000 plan approved	5,7
BLT articulated LRVs	145,796
Hasler renamed Ascom Hasler	797
Manufacturers fill order books	363
Private railway investment	501
Radiocom subsidiary formed	13
RBS LRVs for Line G	12
RhB articulated restaurant car	72
RhB Bernina line railcars	797
SBB Bahn 2000 freight spin off	5
SBB Bahn 2000 new lines	91
SBB Bahn 2000 coach design	139
SBB cargo sorting centres	648
SBB Class Re4/4V power cars	177*,648
SBB Class Re4/4VI electric locos	69
SBB Grauholz cut off line	7,139,199
SBB flight check-in at stations	201
SBB loading gauge reconstruction for intermodal traffic	67,313*
SBB load profile scanners	619
SBB MklV restaurant cars	645
SBB motorail service	12,360
SBB office car in service	796
SBB Panorama coaches	201
SBB rigid contact rail test	504,651
SBB rolling stock plans	645
SBB Seetalbahn reconstruction	648
SBB Shimmis steel coil wagons	505
SBB telephones on trains	205
SBB ticketing equipment order	797
SBB tilting train examined	792
SBB Zürich S-Bahn	203,360,643,648
SBB Zürich S-Bahn ATC	643
SBB Zürich S-Bahn coaches	360,648
SBB Zürich suburban spending	203
Self-steering motored axles	563
SZU underground extension	12,
TPC new stock for Bex - Breteyre	205
TPG Genève tramway extension	12
TPG Genève transport vote	204
TSOL Lausanne light rail line	143,440

## TAIWAN

Kaohsiung transport study	565
TRA coach bogie tenders	441
TRA EMUs delivered	793
TRA DMU tenders	505
TRA rolling stock plans	361
TRA signalling equipment tenders	505
TRA 1988 review	DR63
Taipei green line construction	563
Taipei mini metro contract	439,499
Taipei metro tender registration	795
Taipei metro proposals submitted	361
Taipei metro Red line	439

## TANZANIA

Tazara breakdown cranes delivered	648
Tazara cereal wagon air brakes	565
Tazara donors fund development and rehabilitation work	823*
Tazara overseas aid funding	201,283
Tazara wagon order	499
TRC Central line bridge repairs	72
TRC coach refurbishing	796
TRC container wagon bids	441
TRC development study contract	289

## THAILAND

Asean Express luxury train	793
Bangkok metro progress	359,719(map)
SRT sleeping car order	721
SRT coach bogie tenders	73
SRT DMU tenders	205
SRT track machine tenders	13
SRT 1988 review	DR66

## TUNISIA

SMLT LRV tenders	361
SMLT wagon tenders	565
SMLT 1988 review	DM69
SNCFT track machine tenders	361

## TURKEY

Ankara metro tenders	701
Ankara metro prefers UTDC	503
Bosphorus tunnel plans	437,563(map)
IETT Istanbul light rail line	359,796
Istanbul metro	563
TCDD DMU order	13
TCDD diesel loco order	361
TCDD high speed coach plan	564
TCDD Kayas - Cetinkaya signalling contract	797
TCDD Sincan - Eskisehir electrification	715
TCDD diesel engine tenders	145
TCDD railbus tenders	505

## UGANDA

UR wagon brakes contract	289
UR wagon order	441

## URUGUAY

AFE diesel loco rehabilitation	145
AFE radio signalling plan	721
AFE route rationalisation plan	141

## USA

Alaska RR double deck coaches	505
American President fits AEI	793
Amtrak additional trains	12,796
Amtrak drugs involved in crash	150
Amtrak passenger coach order	501
Amtrak tilting Talgo and LRC on test for Conestoga group	141,355,435
Amtrak to quit Grand Central	561(map)
Amtrak Viewliner coach	12,67
Amtrak Washington Union station restoration	720
Atlanta intermodal show	363
Baltimore light rail plan	143,361,795
Bart extension plans	71,446,649
Bart Golden Gate bridge rail plan	802
Boston metro Red line	361
Boston & Maine Brattleboro - Windsor line restoration deal	360
Brecknell Willis US agency	289
Buy America legislation	802
C&NW train crew revolution	353
Caltrain San Francisco extension	720
Central Mfg buys Isaringhausen	441
Coal-fired diesel engines	796
Conrail B40-8 diesel order	73
Conrail/Santa Fe double stack trains	504
CSX hopper and coal wagon orders	441
CTA metro revamp	36*(map),205
CTA Midway Airport line	439
CTA vital processor interlocking	721
CXT taken over by Costain	361
DART (Dallas) car choice	203
DART funding vote	366,504
DART route purchase from SP	441
Fayette County branch	73
Florida DoT double deck coaches	717
Florida DoT Palm Springs - Miami line operating bids called	144
Florida high-speed proposals	199,285
Galveston light rail line	648
Garrett Transit Vehicle Propulsion Systems taken over by ABB	361
GM loco works rationalisation	137
Houston light rail vote	205
Jacksonville VAL line	441
Las Vegas maglev	145
LIRR double deck coach order	366,795
LIRR prototype EMU bids	283
LIRR Ronkonkoma line electrified	145
LIRR Jamaica reconstruction	69
LACTC automatic metro plan	446
LACTC Long Beach light rail line	73,143,287,361,446,649
Marta North line extended	145
Marta Hartfield airport extension	361
Maryland MTA metro contract	288
MBTA coach orders	441,501,797
MBTA Franklin line extension	504
MBTA Kendall station renovation	72
MBTA new cars from UTDC	288
Metro North Yankee Stadium station	441
Miner Enterprises buys Garrett	73
MkVII national Road/Rail plan	510
NJT coach order	205

NJT electric loco orders	505,721
NJT Kearney connection	360
NJT South Brunswick station	72
Newark peoplomover plan	796
New York light rail plan	796
Norfolk - Virginia Beach light rail line proposals	143,721
Norfolk Southern flange lubrication	13
NVTC commuter trains	441
NYCTA automatic ticket machines	205
NYCTA prototype EMUs call	18
NYCTA R68 cars delivered	287
NYCTA Lexington - 4th Avenue line renovation	73
NYCTA returning to good repair	DM7
NYCTA services interrupted	361
OB products acquired by Lucas	649
Orange County commuter line plan	288
PATH new Harrison depot	12,649,797
PATH nine-car train study	145
Phoenix light rail plan	441
Presidential transport policy issues	497
Railstar train tracking	519
RailTrailer versus Trailer-Rail	473
Regional railways boom ends	517*
Rio Grande buys SP	67,559,643
Riverside County commuter line	288
Safetran distributors for MDS	649
San Diego light rail funding	13
San Diego LRV order	288
San Francisco Muni Metro light rail extension	143
San José LRT extension	361
San José LRT in service	503
San José LRT 1988 review	DM55
San Mateo County Bart funding vote	720
Santa Fe diesel loco deliveries	441
Santa Fe tries CN comfort cabs	796
SCRTD cab signalling	361
SCRTD resilient pads order	72
SCRTD metro extension plan	648
Septa Frankford line	288,649
Septa in turmoil	78
Septa strategy changes	570
SP diesel loco orders	797
SP diesel loco deliveries	289
Three phase drives gaining favour	147
UP hydraulic retarders	361
UP simulator order	505
UP RoadRail service	12,205
UP Omaha dispatching centre	13
USAF MX missile trains	435
Vapor Corp restructured	505
WMATA cab signalling	361
WMATA green line extension	721

  

<b>USSR</b>	
Aluminium metro train design	797
Heavy machine sector restructuring	18
Kazan metro design started	145
Kuybyshev metro opened	73
Moscow metro extensions	13,73,145
SZD Class ERZT Inter-Obst trains	440
SZD Leningrad - Helsinki service improvements	12,72
SZD Leningrad metro extension	649
SZD modernisation agreement with German Federal Republic	205
SZD Makat - Inder line opened	72
SZD Moscow - Leningrad high speed trains	457*
SZD telephone link to all stations	144
SZD new Kiev station planned	648
SZD north - south high speed line	643
SZD trans-Siberian electrification	144
SZD Vyritsa - Chovolov electrified	72
SZD Vologda - Konosha line electrified	72,145
SZD wagon order increased	797
SZD WPX coaches delivered	565
SZD coaches from Yugoslavia	7
Tashkent metro Line 2 opened	13
Tolyatti metro plan	440
Ufa metro planning started	145
Zheltoreksport formed	721

  

<b>VENEZUELA</b>	
Caracas metro extension	357
Caracas metro 1988 review	DM20
Plans for new railways	357,793

<b>VIETNAM</b>	
DSVN Hanoi - Ho Chi Minh city line rehabilitation	144

  

<b>YUGOSLAVIA</b>	
JZ Albania link closed	570
JZ main line upgrading plan	559
JZ snowploughs delivered	145
JZ Spoljina container terminal	440
JZ Subotica station reconstruction	796
JZ 1988 review	DR69

  

<b>ZAIRE</b>	
Funds agreed for Voie Nationale rehabilitation work	285,435,726
ONATRA hopper wagon delivery	361
SNCCZ AD26C diesel loco order	145
SNCCZ line rehabilitation	505,720
SNCCZ telecommunications repairs	505
SNCCZ track renewal tenders	649

  

<b>ZAMBIA</b>	
ZR container wagons delivered	797
ZR digital radio links	721
ZR freight vans delivered	205
ZR motive power crisis	150
ZR radio communications contract	361
Tazara breakdown cranes delivered	648
Tazara cereal wagon air brakes	565
Tazara donors fund development and rehabilitation work	823*
Tazara overseas aid funding	201,283
Tazara wagon order	499

  

<b>ZIMBABWE</b>	
NRZ optic fibre link	649
NRZ wagon orders	13,505
NRZ 1988 review	DR74

  

<b>LETTERS</b>	
ACTS and LIC	76
Brazilian gauges	724
British meals on wheels	568,652
Faster through Kent	16
Flying cargo at ground level	724
Gauge and speed	208
Ganz Loco's future in doubt	800
Ganz not bankrupt	444
Garratt revival	724
Gradients and maglev routes	444
Holes under London	652
Lack of motivation paralyzes NRC	508
Official graffiti	568
Ostrich outlook	800
Political balance	652
Powered doors	364
Revenue protection	76
Reversal unnecessary	148
Signals in the cab	76,148
Stinking fish	800
Swiss designs	292
Taipei tenders will be fair	148
Tangara bogies	364
Track not public yet	148
Tunnel links	16
Vesuvian funiculars	444
West Hampstead connections	444
What gauge in Brazil?	508
Wrong design emphasis	568

  

<b>MAPS</b>	
Africa: links to the sea	807
Argentina: Subte Line A extension	439
Austria: ÖBB planned new lines	75
Austria: Wien U-Bahn	168
Bangladesh: Jamuna river crossing	791
Botswana: Botswana Railway	822
Brazil: cut off lines	437
Canada: Edmonton light rail	DM23
Canada: Montreal metro	DM45
Chile: Santiago metro	DM57
China: Shanghai metro	719
Colombia: Medellin metro	DM39
Cuba: Habana metro	11
Denmark: København metro	11
Egypt: Cairo metro	34

France: Bordeaux VAL scheme	673
France: Lille metro	DM27
France: Lyon metro	DM33
France: Nantes tramway	DM48
France: Orlyval scheme	359
France: Paris relief schemes	723
France: TGV Lyon bypass route	141
France: TGV Nord	765
France: TGV Paris bypass route	199
German Fed Rep: München U-Bahn	795
German Fed Rep: Nürnberg U-Bahn	DM51
German Fed Rep: W Berlin S-Bahn	160
Great Britain: Avon metro	15
Great Britain: Channel Tunnel high speed line proposals	507
Great Britain: Channel Tunnel construction railway	697
Great Britain: Heathrow airport link	559
Great Britain: King's Cross/St Pancras redevelopment scheme	207
Great Britain: Leeds light rail	563
Great Britain: London rail study	651
Great Britain: Southampton city centre peoplomover	675
Hong Kong: Tuen Mun LRT	DM12
Hong Kong: MTR	DM25
India: Calcutta metro	DM17
India: North East Frontier lines	283
Israel: Tel Aviv Ayalon corridor	835
Japan: Chiba monorail	287
Japan: Sendai metro	DM61
Japan: Shinkansen lines	715
South Korea: Seoul metro	503,DM64
Mexico: Mexico City metro	DM40
Norway: Oslo airport ring line	795
Poland: Warsaw metro	DM71
Portugal: electrification and new line proposals	108
Romania: Bucuresti metro	DM15
Singapore: Mass Rapid Transit	DM5
South Africa: Johannesburg metro	71
South Africa: Tshikondeni coal mine branch	643
Spain: Andalusia high speed line	103
Spain: Bilbao metro	679
Spain: Madrid metro	15,DM36
Spain: Madrid airport rail link	201
Sweden: Stockholm - Göteborg new line proposals	643
Switzerland: Bahn 2000 new lines	91
Switzerland: Alpine base tunnel routes proposed	291,645
Thailand: Bangkok metro	719
Tunisia: Tunis light rail	DM69
Turkey: Bosphorus tunnel link	563
USA: Chicago metro	36
USA: Chicago O'Hare airport VAL	673
USA: Jacksonville VAL	673
USA: New York Penn station link	561
USA: San José light rail	DM55
Venezuela: Caracas metro	DM21
Venezuela: rail network plan	357

  

<b>PRODUCT NEWS</b>	
Australia: track recorder	261
Canada: portable jacks	337
Denmark: vacuum toilets	481
Finland: rescue cranes	185
France: hot box detectors	261
France: hard magnetic cards	699
France: barcode scanners	545
France: ticket machines	545
German Fed Rep: axleboxes	261
German Fed Rep: emergency lights	117
German Fed Rep: grooved rail cleaning machine	699
German Fed Rep: hand shunter	625
German Fed Rep: long-distance ticket issuing machine	481
German Fed Rep: off-train heating supply pack	49
German Fed Rep: on-train radio and video entertainment	49
German Fed Rep: platform bridge	773
German Fed Rep: power wrench	481
German Fed Rep: sliding roof container	773
German Fed Rep: vibration and noise absorbers	625

Great Britain: arc shutters	699
Great Britain: cable troughing	417
Great Britain: corrosion resistant overhead catenary cantilever	49
Great Britain: fireproof compounds	843
Great Britain: flashing light lamp	49
Great Britain: friction buffers	481
Great Britain: keyless lockers	699
Great Britain: LCD-based passenger information system	49
Great Britain: loco energy monitors	843
Great Britain: long life battery	773
Great Britain: pass. information	773
Great Britain: phenolic pultrusions	261
Great Britain: photo-luminous signs	117
Great Britain: portable light masts	545
Great Britain: printout backup for radio signalling	261
Great Britain: rail baseplate	417
Great Britain: retarder lubricators	185
Great Britain: selective metallising	625
Great Britain: tank indicator gauge	481
Great Britain: track drain	417
Great Britain: underfloor generators	337
Italy: announcement system	117
Italy: microprocessor cab signalling	625
Italy: road/rail concrete mixer	337
Netherlands: fireproof conduits	337
Netherlands: message recorders	185
Sweden: defective wheel detector	843
Sweden: flexible brake suspension	699
Sweden: hydraulic crane	843
Sweden: long-reach mobile crane	337
Sweden: radial steering bogie	545
Sweden: screw compressors	545
Switzerland: fireproof battery case	117
Switzerland: rotary snow ploughs	117
USA: grade crossing predictor	117
USA: hunting control bearings	843
USA: double stack container cars	545
USA: road-rail shunting loco	417
USA: solid state crossing control	773
USA: tunnel enlarging unit	185
USA: wagon hopper doors	625
Yugoslavia: ticket cancellor	417

  

<b>PUBLICATIONS</b>	
A-Z of Rail Reopenings, by Railway Development Society	338
A strategic transport plan for inner east London, by Dr M J H Mogridge	417
Australia by Rail, by Colin Taylor	844
British railway electrification map	119
British Rail at Work: InterCity, by John Gough	186
British Rail main line diesel locomotives, by C J Marsden and G Penn	844
British Rail Track Diagrams, Eastern & Anglia Regions	482
Canadian Trains Canadiens, by Guy and Mireille Charmentier	417
China by Rail, by Patrick and Maggie Whitehouse	774
City Transport in Developed and Developing Countries, by Professor Tom Rallis	261
Computer aided dispatching.	482
Danger Signals, by S Hall	51
Eisenbahnatlas DDR, by Hans Joachim Kirsche and Hans Müller	338
Eisenbahn Ingenieur Kalender 88	338
Electric equipment for urban transport systems	701
European Sleeping Cars	546
Evaluation of potential applications of automatic equipment identification to rail intermodal terminals	261
Experience with the introduction and operation of high speed lines	627
Fève: Un viaje hacia el Norte, by Ramón Nieto	186
Jahrbuch Schienenverkehr 7, by Helmut Roggenkamp	417
Janes Urban Transport Systems 1988	627
International Railway Statistics 1986	186
La signalisation ferroviaire, by Roger Rativeau	261
Lauftechnik für hohe Geschwindigkeiten. Edited by Dipl-Ing F Höfner and Prof Dr-Ing K Schreck	844

Les Travaux Souterrains en France	51
Minilok für Schiene und Strasse	482
Moving people in tomorrow's world	119
Nahverkehrs-Taschenbuch '88	186
Ninth RIA motive power course	701
NUR: 75 years of industrial trade unionism	546
UITP performance specifications for electric wire and cables used in underground transit systems	417
Rail Atlas of Britain & Ireland, by S K Baker	774
Rail 300: the world high speed train race by Murray Hughes	119
Railway Industry Association signalling & communications course	51
Railroad energy technology II	546
The Railway Station: a social history, by J Richards and J MacKenzie	338
SAB Nife	482
Sistemas de següretat i de control de trafic	627
The transport revolution, by Philip Bagwell	774
The railway workshops of Britain, by E J and J G Larkin	701
The Victoria Line: a short history, by M A C Horne	844
TGV, by Brian Perren	701
Tunnel Vision, by Robert Adley	627
Wagon of smoke, by Arthur Beckenham	261
Wear processes at the wheel/rail interface	119
Wege in die zukünft, by Knut Reimers and Wilhelm Linkerhäger	51
We transport energy to order	546
Zukunftsperspektiven der DB, by Prof Gerd Aberle	774

## PEOPLE

† indicates deceased

<b>A</b>	
Abbott, B	365
Adam, O M	209
Adams, P	445
Adelkvist, V	77
Afishar, S	77
Afzal Khan, M	17
Agnew, N	445, 801
Ahmad, S Z	445
Alcock, P J O	801
Allan, R	293
Allen, L M	365
Allen, J	149
Ambrus, A	509
Ameer Chaudry, M	77
Amoore, F R	365
Anas, A	445
Andersen, A	77, 293
Anderson, J	209
Andresen, O	77, 293
Apedale, M D	149
Arana, L E	365, 569
Arecha, J M G	365, 569
Arthurton, I	365, 801
Artusa, A	365, 569
Atkins, A	725
Avery, J R	293
<b>B</b>	
Baeriswyl, M	209
Bahl, S	17
Baksh, Ms B R	293
Barden, S	293
Bannas, W	365, 653, 725
Bannon, G W	365
Barker, J	77
Barkway, J	445
Barnevik, P	17
Barron, K W	725
Barnard, J	77
Bartlett, J V	293
Batalia, M B	445
Bateman, F	17
Bateman, P	509
Bayman, R	149, 445, 569, 801

Beaudoin-Sauvé, Mrs	149
Beck, Dr G	445
Beck, P	77
Beijbom, C	509*
Benson, R P	445
Bentley, J	801
Bernstein, C	445
Berry, L	17
Bénard, J F	149*
Bernard, K	801
Bernard, J-P	293
Berthoud, S	17, 77
Bertrand, A	209*
Beuret, Dr G	209*
Biehl, R	293
Blackburn, Ms A	801
Blackwell, M A	17
Blake, D	77
Blank, J P	17
Bleasdale, C	77
Boivin, J-R	149
Boix, A	509
Boland, T	149
Bongiorno, J M	653
Bonnett, C	801
Bonny, J	365
Boon, Ir W J	509
Boonyaratavej, C	801*
Boutellier, J-C	209
Bouton, D	209
Boyce, L	17
Boyd, R B	365
Brauer, P	725
Break, G M	569
Bright, Sir Keith	801
Brindle, A	801
Brockie, P E	17
Brody, C	509
Broshous, Lt-Col C R	77
Brown, C K	569
Brown, I	653, 801
Brown, R H	209
Brown, R J	209
Brunetti, J C	365, 569
Bubel, Dipl-Ing H	509
Büchler, H	293
Buggs, W J	365
†Bull, R	365, 509
Burgess, R	509
Burridge, K	77
Busby, R	365
Busher, J R	725
Buxton, J	725

<b>C</b>	
Cameron, E	445
Cameron, J, CBE	569
Campbell, J B	149
Carrez, J F	209
Casey, M	77
Castleman, A	653
Castroman, J M	445
Centenario, E	365
Cesário Amaro da Silveira, L	725
Chang, B S	653
Chapman, J	209
Charlebois, M-A	149
Chalazon, J	209
Chama, O	77
Chambers, R E	725
Charrin, H	293
Chaturvedi, K	509
Chaudari, P S	209
Chivonivoni, C M	569*
Chomba, R M	77
Clark, E	17
Clarke, B	801
Clausen, H P	569
Clement, J R	725
Colin, J	209
Colle, M	653
Collet, C	209
Colliard, J	569
Collof, S	77
Cooksey, A	209
Corbett, G	209
Coster, J	209*
Coyne, M	149
Craghs, P J W	365*
Crane, L S	149, 365

Cray, C	569
Crider, D	509
Crippa, M	17, 653
Crossman, J R	17
Curti, Dr B	509
<b>D</b>	
Dahlsten, U	445
Dale, B	77
Dallochio, O H	569
Daniels, B	569
D'Annunzio, D	569
Danson, B	509
Darr, M I	17
Davis CBE, J	725
Dee, G	365
De Fronzo, P J	801
Delarue, J-M	569
Delebarre, M	509, 569
Delung, H L	209
Derbyshire, I	801
Derveux, J-P	293
de Tessieres, A	77
Devereux, C	365
De Ville, O	509
Diaz, C I	365
Dieterle, J	209
Dixon, R L	445
Dodd, G	149
Dorey, B	801
Dorrey, J A	725
Dreisbach, D	149
Dube, A	569
Dugue, M M	209
Duncan, D F	445
Dunn, E D	17
Dupuy, J	209
Durko, T M	293

<b>E</b>	
Edgley, R	365
Edwards, G	149
Edwards, R L	445
Eisenring, H	17
Elder, T	293
†Elliot, Sir John	653
Empson, R	77
Engle, R	569
Erdal, B	725*
Eriksson, A	365
Essig, P	77, 209, 365
Etherington, P	365
Evans, G	653

<b>F</b>	
Faisse, M	209
Fafagnini, H-P	293
Fagundes Netto, F	725*
Fara, A	365, 569
Farrow-Smith, R	17
Fennel, M J	17
Ferguson, K J	801
Fernandez, B F	445
Ferretti, M	509
Fields, J	445
Firth, D	365
Fish, M	17
Fitzgerald, J	77
Fitzgerald, T	77
Fletcher, D L	569
Flier, H van der	445
Flühmann, C	149
Fogg, J	569
Forman, J	209
Fournier, J	653*
Freundesen, E	725
†Fujii, M	209
Furbick, B	149
Furby, R	365
Fussey, J	725

<b>G</b>	
Gagnon, G R	365
Gambaccini, L J	569
†Gandell, Sir Alan	653
Gasser, Dr T	17
Gates, J	569
Gay, A	653
Geist, R A	77

Geok, L L	725
George, D	801
Gérin, R	149*, 653
Ghiasuddin, Eng M	17, 209, 293
Gill, J	509
Gillies, A	445
Glättli, M	365
Gooden, C C W	725
Goodwin, B	149
Gorla, C	149
Gorodiche, N	209
Gotch, J	149
Graham, B	725
Greebe, J	509*
Green, F J	725*
Gremaud, L	445
Gridland, Ms R	17
Griffiths, Miss C	445*
Griffiths, D	653
Graham, B	293
Grové, Dr E L	149
Grünig, Dr C	17
Grygiel, J	77
Günther, A	509
Gustafsson, G W	509
Gutiérrez, A J	365

<b>H</b>	
Hall, C	653
Hamadani, Dr-Eng F A	653*
Hammer, G M F J	509
Hampson, R P	17
Harding, B	725
Hargreaves, J	149, 801
Harpum, R	569
Harrison, R	149
Haumann, H	293
Haverty, M	77
Haywood, P	17
Head, T	149
Hellewell, D S	445
Henderson, A	365
Hepworth, B	365
Higgins, J F	17
Higham, P	509
Hill, D	801
Hirano, Prof F	17
Hodgson, K	77*
†Hoekzema, G Th E	209
Holaway, R A	445
Holmes OBE, M	801
Hornby, D	509
Hövel, F	445
Howard, A	725
Howarth, D	801
Hoyle, Ms S	509
Huber, Dr-Ing H J	801
Hunt, Sir N	209
Hupkes, G	365
Hussain, H I	17, 653
Hyland, N	293

<b>I</b>	
Ingersoll, R	509
Iqbal, Z	17
Isihara, S	17
Ivester, Ms J A	445

<b>J</b>	
Jamali, M Z K	509
James, K J	17
Jensen, E	725
Jensen, R	653
†Johnson KBE, Sir Henry	209
Johnson, P	365
Johnson, R D	509
Jones, H B	365
Jones, W N	17
Jönsson, P	725
Joss, P	293
Judd, S	801
Junilla, J	653

<b>K</b>	
Key, K F	149
Kälin, Dr J P	17, 77*
Kallionpää, E	653
Kamal, A	509
Kastner, Dr-jur J	725

Keeling, R	509	Megia Fuente, Ing M J	208*	Reddy, L T	149	Tarar, L D	17,445
Kelsall, J P	569*	Melberg, G M	149	Reed, J S	445	Teixeira, S	445*
Kemper, G	445	Melhoff, B E	725	Regazzoni, G	445	Theodore, J F	209
Kever, J F	209	Mellitt, Prof B	653,801	Rehman, A	509,653	Thomas, R	293
Khan, I S	653	Memon, K	209	Remmert, W	509,653	Thurston, R	77
Khan, M	209	Metcalf, W D	365	Rendback, O	293*	Tipler, H	725
Khursid, K A	509	Miller, F S	509	Rewse-Davies, J	653	Tipple, D	293
Kieni, R	293	Mingasson, P	569	Richardson, R	365	Tober, R J	293
Kill, E	509	Mitchell, Sir David	569	Richter, R	293	Toliver, P	645
Kim, E R	653	Mitra, N	365	Ridgway, D J	725	Toma, I	445
Kim, J M	725	Möller, J	149	Ridley, Dr T M	445,801	Tomasetti, A	209
Kim, M N	725	Moolbach, J G	293	Rimberg, K	801*	Tookey, R	509
King, J B	509	Moolman, Dr A	149*	Rivera-Cuesta, Ing J J	208*	Towle, E G	77
King, R M	293	Moreland, J R	209	Robinson, F C	445	Tucker, J R	569
Kington, R	17	Moreno, E	801	Rogers, D K	17	Tunncliffe, D	569*,801
Kirby, D D	77	Morgan, Ms M K	209	Roith, O	569	Turner, D	801
Koch, P	445	Morgan, R	801	Romhoff, H M	653		
Koistinen, E	653	Morris, R	801	Roosmond, J J J	149	U	
Kontogeorgis, P	149	Morton, D J	569	Rose, Major C F	77,209	Udsen, E	725
Körber, Dipl-Ing J	801	Moss, P	725	Rose, K J	149	ul Haque, S	17*,293*,445
Kostelec, G	801	Muengula, L	149	Ross, G A	209	Umney, A	509
Kragballe, G	77	Myong, Kim Jae	725	Rossbach, F	365,653	Undercoffer 3rd, J C	209
Krebs, R D	445			Roux, C	569	Urban, L	509
Krishnamurthy, K V	445			Rouvoille, P	209,293,569,653	Urie, B	801
Kristensen, H B	725					Usman Siddiqui, M	17
Kubat, H	365	Nacarato, M A	365,569			Uys, F	509*
Kuitinen, H	653*	Narina, K	17	S		V	
Kummrow, Dipl-Ing R	149	Nawab Khan, S	17	Sadok, S	293	Vanbutzele, C	77
Kühni, Ing F	365	Neil, K	509	Saced Pervez, M	17	Vacquier, R	209
		Newbould, P	365	Salmerón, J L	149	Vainnedroye, F	509
		Newton, W	725	Sanborn, R D	293,365	Vallorini, P	209
		Nilsson, Å	509	Santiago, A S	445	Varszegi, G	509
		Ngamanu, V E A	365	Sayers, R	569*	Velázquez, Ing C A	208*
		Norden, R	293,801	Scheiff, W	509	Vidigal Xavier da Silveira, M	725
		Nyalila, A	801	Schlegel, C	17	Vigras, J W	725
		Nygaard, H	209	Scott, M	17,445,801	Vincent, P	209
				Scott, M G	17	Vinnescu, A D	653
				Self, J	445,801	Vogel, K	149
				Sephton, B G	509,801	Vogel, M	801
				Seymour, R	209*	Vollmer, L S	569
				Shard, R	77	Vye, R R	77
				Sharpe, W E	77		
				Shaw, A	365	W	
				Shea, R A	149	Wachter, H-R	209
				Sheikh, M A	509	Waheeduddin, S M	509
				Shepherd, I	569*	Wahlström, B	445
				Sheppard, A	509	Wakatagore, R S	801
				Sheridan, R	653	Walker, J	149
				Shian, P	801	Wallens, M	77
				Shields, Sir Niel	445	Wamberg, Ms J	209
				Shrubshole, M	569	Wansink, L W	17
				Silgueira, Dr L	293	Warburton, I	801
				Silva, W A K	653	Wark, J	77
				Silvekoski, H	209*	Wasscher, Ir D E	509
				Singh, A	293	Waterman, A	445
				Singh, N N	653	Watson, M W	77
				Sinkkonen, V	509	Watson, R A	293
				Sittler, H	725	Weibel, B	509
				Sjöström, R	725	Weiss, Dipl Ing T	365*
				Skopal, J	725	Wennberg, A	149
				Smale, T	293	Westerbrook, D J	209
				Smaoui, A	569	Westfall, F D	293
				Smith, D A	209	Whitehouse, W	77
				Smith, I	17	Whittaker, S	653
				Smith, R W	149	Wickens, Dr A	17*
				Snow, J W	445	Wild, Dr P	653
				Soenius, H	293	Williams, Dr D	293*
				Sørensen, J	725	Williams, D	365
				Spinetta, J-C	569	Williams, H	801
				Spivey, P B	725	Willis, R	653
				Springer, D E	209	Wilson, D	209
				Srinivasan, P K	365	Wilson, F J	149
				†Stähli, Dipl Ing S	17	Wolfe, J R	725
				Stallard, D	293	w'Ondangela, B	149
				Steel, T	77	Wood, P	293
				Steinmann, U	149	Y	
				Strachan, J M	569	Yaljan, V	653
				Strand, K-E	509	Yu, J	725
				Strongman, G	193	Z	
				Strzelecki, M	801	Zanelli, H H	149
				Styles, G	653	Zaoui, A	209
				Sumanen, P	653*	Zechner, R	209
				Sumner, H	801	Ziegler, H	445
				Sundborn, Ms G	365	Ziaullah, M	653
				Sutherland, J P	801		



